MISSILE DEFENSE AGENCY
MDAfacts
Making Ballistic Missile Defense A Reality...

The Ballistic Missile Defense System

Introduction

In years since the end of the Cold War, the increased proliferation of ballistic missile systems and weapons of mass destruction has raised the importance of developing and fielding a capable Ballistic Missile Defense System (BMDS), as a number of potentially hostile countries have acquired these dangerous capabilities. In response to this changing geopolitical environment, the Department of Defense has made building a Ballistic Missile Defense System (BMDS) a priority. The fundamental goal of the planned BMDS is building a layered defense to defend the United States and its forces, territories, allies and friends.

The Missile Defense Agency (MDA)'s mission is to develop, test and prepare for fielding a missile defense system. Using complementary interceptors, land-, sea-, air- and space-based sensors and battle management command and control systems, the planned missile defense system will be able to engage all classes and ranges of ballistic missile threats.

Our programmatic strategy is to develop, test and continuously evaluate production, fielding and operational alternatives for BMDS to provide reliable, effective defenses.

All ballistic missiles share a fundamental characteristic - they follow a trajectory, which includes three flight phases - boost, midcourse and terminal. By fielding a layered defense system and attacking the missile in all phases of flight, we exploit opportunities to increase the effectiveness of missile defenses and complicating an aggressor's plans.

Layered Defenses

MDA is developing and testing the elements of a BMDS capable of engaging all classes of ballistic missile threats. The program integrates Command, Control, Battle Management and Communications (C2BMC) elements into layered defense segments to engage threat targets in all phases of flights. MDA is developing and testing promising technologies including kinetic and directed energy (laser) platforms, radar and electro-optical sensors, and investigating land, sea, air and space basing options. Demonstrated capabilities will be fielded incrementally in "Capability Blocks" to provide near term defense and to increase system robustness to pace the growing threat.

Block Approach

MDA continues to pursue research, development, test and evaluation programs. MDA is working to put defenses into the field in two-year blocks, with successive blocks providing increasing levels of capability to counter all ballistic mission threats. A block is a biennial increment of the BMDS providing an integrated set of capabilities, which has been rigorously tested as part of the BMDS Test Bed and assessed to

adequately characterize its military utility. The configuration for each block is drawn from the prior BMDS Block; BMDS elements, components, technologies, and concepts; Command, Control, Battle Management and Communications (C2BMC) architecture; and externally managed systems, elements or technologies. Each successive block provides increasing levels of capability to counter ballistic missiles of all ranges and complexity.

Once tested, elements and components are available for limited procurement, transition to production or for initial defensive operations as directed. These "off-ramps" may occur any time during the Block Cycle to support timely execution of these transition or fielding decisions. This allows the capability to get into the hands of our customer, the warfighter, at a faster rate than would otherwise be possible, while MDA continues future development. Deployment decisions are based on an assessment of system technology and operational effectiveness, status of threat, system cost and national security considerations.